



H04L 29/06

(30) Priority:

LINK CONNECTION CONTROL PROTOCOL EMBODYING APPARATUS AND METHOD FOR TRANSMITTING IP MULTICASTING/BROADCASTING PACKET DATA IN MOBILE COMMUNICATION NETWORK

The diagram illustrates a network architecture for mobile communication. It is divided into three main sections: a mobile network (102), an IP network (100), and a carrier's intranet (101).

- Mobile Network (102):**
 - RAN (103):** Radio Access Network, containing four BTS (Base Transceiver Stations) labeled 104 and four BSC (Base Station Controller) components labeled 105. The BSCs are connected to the BTSs via Abis interfaces.
 - Core Network (106):**
 - Contains an MSC/VLR (107) connected to the BSCs via A3/A7 and A1/A2 interfaces.
 - Contains an HLR/AUC (108) connected to the MSC/VLR via an ANS-4 interface.
 - Contains a PSTN/PCS/PLMN (109) connected to the MSC/VLR.
 - Contains a PSN (110) connected to the MSC/VLR via an R-P I/F interface.
- IP Network (100):**
 - Contains an Internet (110) and a Server (111).
- Carrier's Intranet (101):**
 - Contains an IP M/B server (101) connected to the PSN (110) via an R-P I/F interface.

The diagram also shows a "Data Link-PPP" connection between the mobile network and the IP network, and an "IP catagram" connection between the IP network and the carrier's intranet.

CONSTITUTION: A base station(104) divides and transmits IP multicasting/broadcasting packet data from an internet host or an IP packet multicasting/broadcasting packet server through a base

station controller/packet
controller into a radio frame. A mobile communication terminal(105) combines the
radio frame from the base station(104) and forms a P packet
multicasting/broadcasting packet. A repeat transmission request message based
multicasting/broadcasting link connection control protocol confirms a frame
transmission in a radio link between the base station(104) and the mobile
communication terminal(105).

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